2016 Spring Electrofishing (SEII) Summary Report

Weyauwega Lake (WBIC 257700)

Waupaca County

Introduction and Survey Objectives

In 2016, the Department of Natural Resources conducted a one night boomshocking survey of Weyauwega Lake in order to provide insight and direction for the future fisheries management of this water body. Primary sampling objectives of this survey are to characterize species composition, relative abundance and size structure. The following report is a brief summary of the activities conducted, general status of fish populations and future management options.

Acres: 274.2
Lake Type: Impoundment
Regulations: Statewide Default Regulations
Shoreline Miles: 4.48
Public Access: Boat Launch
Maximum Depth (feet): 11

WISCONSIN DNR CONTACT INFO.

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Survey Information							
Site location	Survey Date	Water Temp. (F)	Target Species	Total Miles Shocked	No. of Stations	Gear	Dippers
Weyauwega Lake	5/09/2016	63	All	1.5	3	Boomshocker	2

Fish Metric Descriptions
PSD, CPUE, LFD and Growth

Proportional Stock Density (PSD) is an index used to describe size structure of fish. It is calculated by dividing he number of quality size fish by the number of stock size fish for a given species. PSD values in the 40 to 60 percent range generally describe a balanced fish population.

Catch per unit effort (CPUE) is an index used to measure fish population relative abundance which simply refers to the number of fish captured per unit of distance or time. For lake surveys we typically quantify CPUE by the number and size of fish per mile of shoreline. CPUE indexes are compared to statewide data by percentiles. For example, if a CPUE is in the 90th percentile, it is higher than 90% of the other CPUEs in the state.

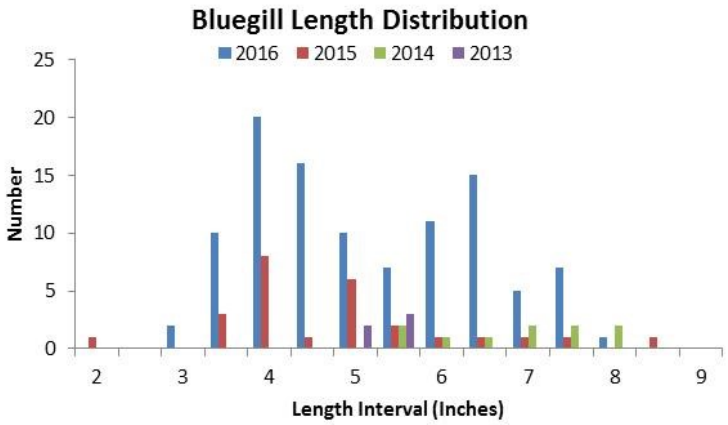
Length frequency distribution (LFD) is a graphical representation of the percentage of fish captured by one inch size intervals. Smaller fish (or younger age classes) may not always be represented in the length frequency due to different habitat usage or sampling gear limitations.

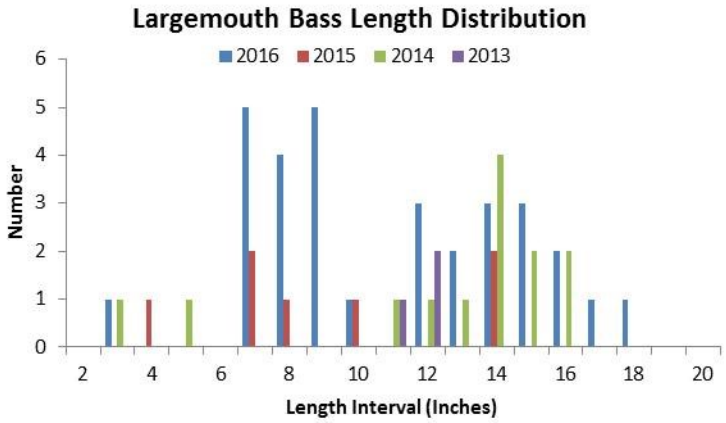
Survey Method

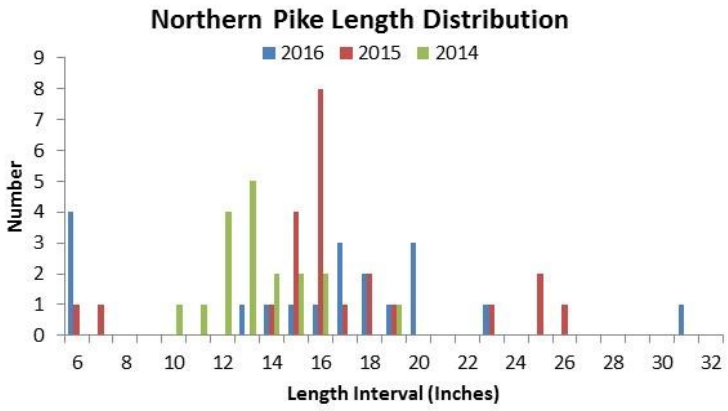
- Weyauwega Lake was sampled according to spring electrofishing (SEII) protocols as outlined in the statewide lake assessment plan. The primary objective for this sampling period is to count and measure adult bass and panfish. Other gamefish may be sampled but are considered by-catch as part of this survey.
- One and a half miles of shoreline was sampled. All fish captured were identified to species and measured for length.
- Fish metrics used to describe fish populations include proportional stock density, catch per effort and length frequency distribution,.

Size Structure Metrics									
Species	Total	Average Length (inches)	Length Range (inches)	Stock and Quality Size (inches)	Stock No	Quality No	PSD	Percentile Rank	Size Rating
BLUEGILL	104	5.4	3.3 - 8.3	3.0 and 6.0	104	39	38%	57th	Moderate
LARGEMOUTH BASS	31	11.5	3.3 - 18.8	8.0 and 12.0	25	15	40%	24th	Low
NORTHERN PIKE	19	16.4	6.0 - 31.4	14.0 and 21.0	14	2	14%	20th	Low
PUMPKINSEED	100	5.1	3.4 - 9.5	3.0 and 6.0	100	21	21%	37th	Moderate - Low

Abundance Metrics							
Species	CPUE Total (no per mile)	Percentile Rank	Overall Abundance Rating	Length Index	Length Index CPUE	Percentile Rank	Abundance Rating
BLUEGILL	104	55th	Moderate	≥ 7.0	13	69th	Moderate
LARGEMOUTH BASS	20.7	60th	Moderate	≥ 14.0	6.7	75th	Moderate
NORTHERN PIKE	12.7	98th	High	≥ 21.0	1.3	81st	Moderate - High
PUMPKINSEED	100	97th	High	≥ 7.0	2	80th	Moderate - High







Stocking History				
Species	**Year**	**Age**	**Mean Length**	**Number Stocked**
BLUEGILL	2016	LARGE FINGERLING	0.5	21789
LARGEMOUTH BASS	2015	LARGE FINGERLING	1.9	9771
YELLOW PERCH	2014	ADULT	4.5	2322
LARGEMOUTH BASS	2014	LARGE FINGERLING	3.2	6215
BLACK CRAPPIE	2014	LARGE FINGERLING	4.5	2500
NORTHERN PIKE	2014	SMALL FINGERLING	3.3	25085
LARGEMOUTH BASS	2013	LARGE FINGERLING	2.1	7819
NORTHERN PIKE	2013	SMALL FINGERLING	4.7	25098

Summary

- A total of 477 fish in 14 species were collected during our survey. The most frequently encountered and common species were bluegill (104), common carp (130), pumpkinseed (100), largemouth bass (31) and northern pike (19).
- Common carp were abundant and included smaller fish that appeared to be only a few years old.
- Other species sampled in low abundance included black bullhead (44), golden redhorse (3), golden shiner (2), greater redhorse (2), rock bass (3), smallmouth bass (8), warmouth (3), white sucker (17), and yellow bullhead (11).
- Largemouth bass was the dominant gamefish captured in our survey. Size structure and abundance metrics were at moderate levels. The largest bass sampled was 18.8 inches and 40% of bass captured were greater than 14.0 inches.
- 19 northern pike were sampled. Fyke netting would be the more appropriate sampling technique to assess this population.
- Panfish populations were mainly comprised of bluegill and pumpkinseed. Bluegill were found in moderate density and size structure, with 38% of the catch greater than 6.0 inches and 13% greater than 7.0 inches. Pumpkinseed were found in moderate abundance and size structure was average, with 21% of pumpkinseeds greater than 6.0 inches and 2% greater than 7.0 inches.
- Panfish abundance metrics appear to be rebounding when compared to the past few years surveys. This was the first year that we saw significant bluegill recruitment since the water was brought back up post drawdown in 2013; an encouraging sign.

Management Options

This survey was primarily intended to assess largemouth bass and sunfish populations. Other species were captured but different survey techniques are typically used to assess their population metrics. Therefore, management recommendations are focused on bass and panfish.

Largemouth Bass

- Management Objective: Maintain largemouth CPUE of > 14.0 inches bass at 5-10 per mile and size structure at moderate levels.
- Management Action: None at this time.

Panfish

- Panfish size structure was found at average levels.
- Management Objective: Maintain bluegill size structure and relative abundance at moderate levels.
- Management Action: Predators have been established to control panfish populations. Manage the aquatic plant community to allow predators to effectively forage on panfish to maintain panfish densities at optimal levels.

Other Management Objectives:

- Aquatic plant management has been an ongoing project for years along with high numbers of common carp. We will continue to monitor fish populations on a regular basis to properly manage Weyauwega Lakes' fishery.